VIRGINIA POLLUTION ABATEMENT

PERMIT APPLICATION

FORM D

MUNICIPAL EFFLUENT AND BIOSOLIDS

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Contact the Department of Environmental Quality's Regional office if instructions beyond those provided in the form are required.

Department of Environmental Quality

VIRGINIA POLLUTION ABATEMENT APPLICATION

FORM D

MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-I LAND APPLICATION OF MUNICIPAL EFFLUENT

General Information

1. Facility Name. Name given on Form A.

2. Briefly describe the design and provide a line drawing of the wastewater treatment facility which relates the various components of the treatment system including source(s), treatment unit(s) disposal alternatives and flow estimates from the various process units.

3. Briefly describe the disposal of any solid or sludge waste materials.

4. List all industrial contributors to the wastewater treatment facility.

5. Submit a copy of any leasing agreements related to the treatment works and the use or management of the application fields not under direct ownership of the applicant.

6. All Privately Owned Treatment Works (PVOTW) designed to serve 50 or more residences must be registered with the State Corporation Commission (SCC) prior to applying for a permit. Provide a copy of the SCC Certificate of Incorporation (for Virginia based operations) or the Certificate of Authority (for out of state operations) with the application.

Design Information

Note: This section should be completed for each alternative effluent application system.

Waste Characterization

7. Provide the design flow of the wastewater treatment plant.

8. Provide a sewage effluent characterization in accordance with Part D-III of the application. For a proposed facility, estimates based on data obtained from other similar facilities may be used. More than one sample may be required if the effluent may be expected to exhibit diurnal or seasonal variation.

9. Provide calculations describing the nutrient value of the effluent as mg/l nitrogen (PAN), phosphorus (P_2O_5), potassium (K_2O) and any liming effects which may occur from land application.

Storage and Land Application Requirements

10. Provide calculations justifying storage and land area requirements for wastewater application including an annual water balance on a monthly basis incorporating such factors as precipitation, evaporation, evapotranspiration, soil hydraulic conductivity, wastewater loading, dry periods, and monthly storage (input and drawdown). Provide daily, weekly and annual hydraulic loading rates (maximum and average).

    All facilities must be designed and operated to prevent any discharge to State waters except in the event of a 25 year, 24 hour or greater storm event. DEQ recommends the storage capacity be sufficient to store the entire daily design flow of the treatment works for the duration of the winter months, when land application may be restricted, with a minimum of 60 days storage capacity where adequate climatological data are not available.

11. Provide calculations justifying the land area requirements for land application of sewage effluent taking into consideration average productivity group, crop(s) to be grown and most limiting factor(s), specifically PAN, metal loadings, and Sodium Adsorption Ratio (SAR) or Exchangeable Sodium, where applicable. Demonstrate the most limiting factor for land application on an annual and site life basis.

Site Characterization

Note: A site characterization is required for each land application site on a field by field basis and for each storage facility. Site booklets organized by Operator/Land Owner and County are preferred.

Divide the land application site into individualized units of fields on the basis of agronomic management practices. For example, soils which are similar for productivity or pH adjustment which are adjacent to each other should be grouped as one field if they can be anticipated to receive effluent on similar schedules. Distinctly different soils which may require different agronomic management should be designated separately. For convenience in meeting permit reporting requirements, keep field units small.

12. Provide a general location map which clearly indicates the location of all the land application sites related to this permit application. (See General Instructions for Map Requirements.)

13. Provide a topographic map of sufficient scale (5 foot contour preferred) clearly showing the location of the following features within 0.25 mile of the site. More than one map may be required if the land application site(s) or treatment/storage facilities are not in close proximity. Provide a legend and approximate scale. Clearly mark field and property boundaries. (See Instructions for map requirements.)

    a. Proposed or existing ground water monitoring wells
    b. General direction of ground water movement
    c. Water wells, abandoned or operating
    d. Surface waters
    e. Springs
    f. Public water supply(s)
    g. Sinkholes
    h. Underground and/or surface mines
    i. Mine pool (or other) surface water discharge points
    j. Mining spoil piles and mine dumps
    k. Quarry(s)
    l. Sand and gravel pits
    m. Gas and oil wells
    n. Diversion ditch(s)
    o. Agricultural drainage ditch(s)
    p. Occupied dwellings, including industrial and commercial establishments
    q. Landfills or dumps
    r. Other unlined impoundments
    s. Septic tanks and drainfields
    t. Injection wells
    u. Rock outcrops

14. For each land application site, provide a site plan, preferably topographically based, of sufficient detail to clearly show any landscape features which require buffer zones or may limit land application. Clearly show the field boundaries, property lines, and the location of any subsurface agricultural drainage tile, as appropriate.

    Provide a site plan legend which identifies the following landscape features:
    a. Drainage ways
    b. Rock outcrops
    c. Sink holes
    d. Drinking water wells and springs
    e. Monitoring wells

f. Property lines
g. Roadways
h. Occupied dwellings
i. Slopes (greater than 8% by slope class)
j. Wet spots
k. Severe erosion
l. Frequently flooded soils (SCS designation)
m. Surface waters

15. Provide a detailed soil survey map, preferably photographically based, with the field boundaries clearly marked. (A USDA-SCS soil survey map should be provided, if available.)

    Provide a detailed legend for each soil survey map which uses accepted USDA-SCS descriptions of the typifying pedon for each soil series (soil type). Complex associations may be described as a range of characteristics. Soil descriptions should include the following information:

    a. Soil symbol
    b. Soil series, textural phase and slope class
    c. Depth to seasonal high water table
    d. Depth to bedrock
    e. Estimated productivity group (for the proposed crop rotation).
    f. Estimated infiltration rate (surface soil)
    g. Estimated permeability of most restrictive subsoil layer

16. Representative soil borings and test pits to a depth of five feet or to bedrock if shallower, are to be coordinated for the typifying pedon of each soil series (soil type). Soil descriptions shall include as a minimum the following information:

    a. Soil symbol
    b. Soil series, textural phase and slope class
    c. Depth to seasonal high water table
    d. Depth to bedrock
    e. Estimated productivity group (for the proposed crop rotation).
    f. Estimated infiltration rate (surface soil)
    g. Estimated permeability of most restrictive subsoil layer

17. Collect and analyze soil samples for the following parameters for each field, weighted to best represent each of the soil borings performed for Item l6.

a. Soil organic matter (%)
b. Soil pH (std. units)
c. Cation exchange capacity (meg/l00g)
d. Total nitrogen (ppm)
e. Organic nitrogen (ppm)
f. Ammonia nitrogen (ppm)
g. Nitrate nitrogen (ppm)
h. Available phosphorus (ppm)
i. Exchangeable sodium (mg/l00g)
j. Exchangeable calcium (mg/l00g)
k. Copper (ppm)
l. Nickel (ppm)
m. Zinc (ppm)
n. Cadmium (ppm)
o. Lead (ppm)
p. Chromium (ppm)
q. Manganese (ppm)
r. Particle size analysis or USDA textural estimate (%)
s. Hydraulic conductivity (in/hr.)

Crop and Site Management

18. Relate the crop nutrient needs to anticipated yields, soil productivity rating and the various fertilizer or nutrient sources from effluent and chemical fertilizers.

    If the effluent may be expected to possess unusual properties, provide a description of any plant tissue testing, supplemental fertilization or intensive agronomic management practices which may be necessary.

19. Using a narrative format and referencing any related charts, describe the proposed cropping system. Show how the crop rotation and management will be coordinated with the design of the land application system. Include any supplemental fertilization program, and the coordination of tillage practices, planting and harvesting schedules and timing of land application.

VIRGINIA POLLUTION ABATEMENT APPLICATION

FORM D

MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-II LAND APPLICATION OF BIOSOLIDS

General Information

1. Facility name. (Should be the same name given on Form A).

2. Provide a **general** description of the proposed operation including: name, VPDES (or NPDES) permit number, and location of the generators and owners involved, biosolids treatment and handling processes, means of biosolids transport or conveyance, location and volume of storage proposed, general location of sites proposed for application and methods of biosolids application proposed. A description of temporary storage methods should be provided.

3. Provide a legible copy of any leasing agreements necessary for the operation of the treatment or storage facilities, not under direct ownership of the applicant, which identifies the involved parties.

4. For the storage of biosolids, provide evidence of certification by the local government of the locality in which the biosolids are to be stored that the storage site is consistent with all applicable ordinances. Evidence of certification shall consist of the following:

   a. A copy of the certification from the local government confirming that the storage site is consistent with all applicable ordinances or where the local government fails to respond within 30 days of receiving the request for certification, a copy of the letter from the applicant to the local government requesting certification of the storage facility; **or**

   b. A copy of the special exception or special use permit from the local government that has adopted and ordinance in accordance with § 62.1-44.19:3.R of the Code of Virginia.

5. Provide to the DEQ and to each locality in which the biosolids are to be applied, written evidence of financial responsibility, including both current liability and pollution insurance, or such other evidence of financial responsibility as the Board may establish by regulation in an amount not less than $1 million per occurrence, which shall be available to pay claims for cleanup costs, personal injury, bodily injury and property damage resulting from the transport, storage and land application of biosolids in Virginia. The aggregate amount of the applicant's financial liability shall be $1 million for companies with less than $5 million in annual gross revenue and shall be $2 million for companies with $5 million or more in annual gross revenue.

Design Information

<u>Waste Characterization</u>

6. Provide a biosolids characterization in accordance with Part D-IV for each biosolids. For a proposed facility, estimates based on data obtained from other similar facilities may be used. More than one sample may be required if the biosolids may be expected to exhibit diurnal and seasonal variation.

7. Provide a properly completed Non-Hazardous Declaration Statement for each biosolids, Part D-V.

8. Provide calculations describing the nutrient value of the biosolids as pounds per dry ton nitrogen (PAN), phosphorus (P_2O_5), potassium (K_2O), and Calcium Carbonate Equivalence, if applicable.

Biosolids Storage Facilities

9. Describe the current status of the available biosolids storage facilities. List in a tabular format the biosolids storage facilities by location, total storage capacity(s), and the biosolids contracts currently permitted or assigned to these facilities.

10. Provide plans and specifications for **routine** and **emergency** storage facilities of all biosolids to be handled that depict the following information:

    a. Site layout on a recent 7.5 minute topographic quadrangle or other appropriate scaled map with the following information:

        (1) Location of any required soil, geologic and hydrologic test holes or borings

        (2) Location of the following field features within 0.25 miles of the site boundary (indicated on the map) with the approximate distances from the site boundary.

            (a) Water wells (operating or abandoned).

            (b) Surface waters.

            (c) Springs.

            (d) Public water supplies.

            (e) Sinkholes.

            (f) Underground and/or surface mines.

            (g) Mine pool (or other) surface water discharge points.

            (h) Mining spoil piles and mine dumps.

            (i) Quarries.

            (j) Sand and gravel pits.

            (k) Gas and oil wells.

            (l) Diversion ditches.

            (m) Occupied dwellings, including industrial and commercial establishments.

            (n) Landfills - dumps.

            (o) Other unlined impoundments.

            (p) Septic tanks and drainfields.

            (q) Injection wells.

    b. Topographic map (10-foot contour preferred) of sufficient detail to clearly show the following information:

        (1) Maximum and minimum percent slopes.

        (2) Depressions on the site that may collect water.

        (3) Drainage ways that may attribute to rainfall run-on to or runoff from this site.

        (4) Portions of the site (if any) which are located within the 100-year floodplain.

    c. Data and specifications for the liner proposed for seepage control.

    d. Scaled plan view and cross-sectional view of the facilities showing inside and outside slopes of all embankments and details of all appurtenances.

    e. Calculations justifying impoundment capacity, including freeboard.

    f. A description of supernatant handling and disposal.

g. Groundwater monitoring plans for the facilities including pertinent hydrogeological data to justify upgradient and downgradient well location and depth.

11. Provide generic plans for on-site **temporary** storage.

12. Provide pertinent calculations justifying biosolids storage based on contractual agreements with biosolids generators, annual biosolids production, land area available, and an annual biosolids balance incorporating such factors as precipitation, evapotranspiration, soil percolation rates, wastewater loading, monthly storage (input and drawdown).

Biosolids Transport

13. Provide a detailed description for each of the following:

a. Specifications on all bed and tank vehicles that will be used to transport biosolids from generators or storage to land application sites;.

b. Routes to be used to transport biosolids from the generator(s) to storage unit(s);

c. Procedures for biosolids off-loading at the biosolids facilities and the land application site together with spill prevention, cleanup, (including vehicle cleaning), field reclamation and emergency spill notification and cleanup measures; and

d. Voucher system to be used to document transport and delivery of biosolids from their source to the land application site or a facility to further process the biosolids for marketing. Also describe record retention for vouchers.

Field Operations

14. For field operations involving storage, provide a detailed description for each of the following:

a. Routine storage—biosolids loading of transport vehicles, equipment cleaning, freeboard maintenance, and inspections for structural integrity of the unit.

b. Emergency storage—procedures for DEQ approval and implementation.

c. Temporary or field storage—procedures to be followed including either designated site locations provided in the "Design Information" or the specific site criteria for such locations including the liner/cover requirements and the time limit assigned to such use.

d. Field reclamation of off-loading (staging) areas.

15. For field operations involving the land application of biosolids, provide a detailed description for each of the following:

a. The biosolids spreader vehicles and the specifications of each vehicle.

b. Procedures for calibrating each spreader based on the solids content of various biosolids to ensure uniform distribution and appropriate loading rates on a day-to-day basis.

c. Procedures used to ensure that operations address the following constraints:

(1) Application of biosolids to frozen ground, pasture/hay fields, crops for direct human consumption and saturated or ice/snow covered ground; and

(2) Maintenance buffer zones, slopes, prohibited access for beef and dairy animals, soil pH requirements, and proper site specific biosolids loading rates on a field-by-field basis.

Land Application Sites

Application Site Information

16. Provide a general location map for each County which clearly indicates the location of all the land application sites related to this permit application within that County and proposed transport vehicle haul routes to be utilized from the biosolids source or storage unit to the sites. (See General Instructions for map requirements.)

17. List by County and owner all of the fields, (net) acreages, and tract number related to this permit application, and the last date of biosolids application. Report the data in the following format:

COUNTY	OWNER	OPERATOR	FIELD *TRACT NO.	ACRES	DATE OF LAST APPLICATION
King	Charles	Bill Jones	l	6.9	8/22/89
George	Jones		2	l2.3	8/22/89

*Agricultural Stabilization and Conservation Service tract

18. Provide a properly completed Biosolids Application Agreement for each land owner, Part D-VI.

19. Provide a legible topographic map with legend of proposed land application sites to scale as needed to depict any landscape features that will require buffer zones or may limit land application. The following landscape features should be delineated. (See General Instructions for map requirements.)

    a. Drainage ways
    b. Rock outcrops
    c. Sink holes
    d. Water supply wells and springs
    e. Monitoring wells
    f. Property lines
    g. Roadways
    h. Occupied dwellings
    i. Slopes
    j. Wet spots
    k. Severe erosion (NRCS designation)
    l. Frequently flooded soils (NRCS designation)
    m. Surface waters

    On the same map, also show the acreage to be amended with biosolids together with the net acres for biosolids application computed.

20. Provide a USDA soil survey map, if available, of proposed sites for land application of biosolids with the field boundaries clearly marked.

21. For each field that will receive biosolids, collect a representative soil sample for analyses of the soil parameters indicated in “Soil Test Parameters for Land Application Sites” of D-II. Results of the soil analyses must be submitted with the permit application.

22. Specify the most limiting factor regarding the rate of biosolids land application among metals loadings, nutrients (i.e., plant available nitrogen or phosphorus), calcium carbonate equivalency (applicable to lime stabilized biosolids), or other. Based on the most limiting factor, provide pertinent calculations justifying the land area

requirements for land application of biosolids. Include in these calculations an annual biosolids balance incorporating such factors as precipitation, evapotranspiration, soil percolation rates, wastewater loading, monthly storage (input and drawdown).

23. Provide a nutrient management plan (NMP) prepared by a person certified as a nutrient management planner by the Department of Conservation and Recreation (DCR) for all application sites to receive biosolids. NMPs shall account for all sources of nutrients to be applied to the site and include at a minimum the following information:

    a. Site map indicating the location of any waste storage facilities and the fields where biosolids or animal waste will be applied;

    b. Site evaluation and assessment of soil types and potential productivities;

    c. Nutrient management sampling including soil monitoring;

    d. Biosolids or animal waste application rates based on the overall nutrient requirements of the proposed crop and soil monitoring results; and

    e. Biosolids and other nutrient source application schedules and land area requirements

    Note: An entire site may not receive biosolids due to buffered areas of the site identified in item 19 above. The NMP may specify the application of nutrients from sources other than biosolids within these buffered areas at the same site to achieve uniform crop production throughout the site.

24. Provide:

    a. Evidence, such as a transmittal letter, indicating that a copy of each NMP was provided to the farmer/operator of the site, the DCR Regional Watershed Office and the chief executive officer or designee for the local government; or

    b. A copy of a written request to the applicant from the farmer/operator of the site, the DCR Regional Watershed Office and the chief executive officer or designee for the local government, not to receive the NMP.

25. A NMP approved by DCR shall be required for application sites prior to Board authorization under specific conditions, including but not limited to, sites operated by an owner or lessee of a confined animal feeding operation, as defined in subsection A of § 62.1-44.17.1, or confined poultry feeding operation, as defined in subsection A of § 62.1-44.17.1.1; sites where land application more frequently than once every three years at greater than 50 percent of the annual agronomic rate is proposed, and other sites based on site-specific conditions that increase the risk that land application may adversely impact state waters. For each site required to have a NMP approved by DCR as described above, provide a copy of the letter of approval of the NMP from DCR.

<u>Frequent Application Site Information</u>

26. For projects receiving frequent applications of biosolids, provide the following additional site information:

    a. Representative soil borings and test pits to a depth of five feet or to bedrock if shallower, for each major soil type and the following tests performed and data collected.

        (1) Soil type.

        (2) Soil texture for each horizon (USDA classification).

        (3) Soil color for each horizon.

        (4) Depth from surface to mottling and bedrock if less than two feet.

        (5) Depth from surface to subsoil restrictive layer.

        (6) Indicated infiltration rate (surface soil).

        (7) Indicated permeability of subsoil restrictive layer.

b. Additional soil testing and analytical results specified in “Soil Test Parameters for Land Application Sites” of Part D-II for sites receiving biosolids at “Frequent at Agronomic” rates of application.

c. Groundwater monitoring plans for the land treatment area including pertinent geohydrologic data to justify upgradient and downgradient well location and depth.

27. For frequent land application sites, include the following additional landscape features with those depicted on the topographic map required per item 19 of Part D-II:

a. Water wells, abandoned or operating

b. Underground and/or surface mines

c. Mine pool (or other) surface water discharge points

d. Mining spoil piles and mine dumps

e. Quarry(s)

f. Sand and gravel pits

g. Gas and oil wells

h. Diversion ditch(s)

i. Agricultural drainage ditch(s)

j. Occupied dwellings, including industrial and commercial establishments

k. Landfills or dumps

l. Other unlined impoundments

m. Septic tanks and drainfields

n. Injection wells

SOIL TEST PARAMETERS FOR LAND APPLICATION SITES[1]

	BIOSOLIDS APPLICATION			STORAGE
Parameter	Infrequent[2]	Frequent Below Agronomic Rates[2]	Frequent at Agronomic[2] [3]	Supernatant[4]
Soil Organic Matter (%)			*	*
Soil pH (Std. Units)	*	*	*	*
Cation Exchange Capacity (me/100g)			*	
Total Nitrogen (ppm)			*	*
Organic Nitrogen (ppm)			*	*
Ammonia Nitrogen (ppm)			*	
Available Phosphorus (ppm)	*	*	*	*
Exchangeable Potassium (ppm)	*	*	*	
Exchangeable Sodium (mg/100g)			*	*
Exchangeable Calcium (mg/100g)			*	*
Exchangeable Magnesium (mg/100g)	*		*	*
Copper (ppm)			*	*
Nickel (ppm)			*	*
Zinc (ppm)			*	*
Cadmium (ppm)			*	*
Lead (ppm)			*	*
Manganese (ppm)			*	
Molybdenum (ppm)			*	
Selenium (ppm)			*	
Particle Size Analysis or USDA Textural Estimate (%)			*	*
Hydraulic Conductivity (in/hr)				*

[1] Note: Unless otherwise stated, analyses shall be reported on a dry weight basis(*).

[2] See 9 VAC 25-32-500.B.3.

[3] Testing requirements to be adjusted in accordance with prior analytical test results. Heavy metal analyses are not required but once every three years before application.

[4] Liquid biosolids derived from biosolids use facilities.

VIRGINIA POLLUTION ABATEMENT APPLICATION

FORM D

MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-III EFFLUENT CHARACTERIZATION FORM

1. Facility Name: _____

2. Source or Generator: _____

3. Type of Treatment: _____

4. Degree of Treatment: _____

5. Provide at least one analysis for each parameter listed under effluent. Upon review, additional analyses may be required by DEQ.

Parameter	Effluent	
BOD_5	_____	mg/l
TSS	_____	mg/l
TRC	_____	mg/l
Percent Solids	_____	%
pH	_____	S.U.
Nitrogen, (Nitrate)	_____	mg/l
Nitrogen, (Ammonium)	_____	mg/l
Nitrogen, (Total Kjeldahl)	_____	mg/l
Phosphorus, (Total)	_____	mg/l
Potassium, (Total)	_____	mg/l
Sodium	_____	mg/l

6. Provide at least one analysis of any other pollutants which you believe may be present in the effluent. Upon review, additional analyses may be required by DEQ.

Parameter	Effluent	
Lead	_____	mg/l
Cadmium	_____	mg/l
Copper	_____	mg/l
Nickel	_____	mg/l
Zinc	_____	mg/l
Other	_____	mg/l
	_____	

VIRGINIA POLLUTION ABATEMENT APPLICATION

FORM D

MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-IV BIOSOLIDS CHARACTERIZATION FORM

1. Facility Name: _____

2. Source or Generator: _____

3. Type of Treatment: _____

4. Biosolids Treatment Classification: _____

5. Describe the method of sludge treatment or stabilization for each biosolids source. Provide a flow diagram of each wastewater treatment plant's residual treatment train and yearly biosolids production. In addition, provide the design flow of each facility.

6. For all biosolids, provide at least one analysis for each parameter. The laboratory analytical data must be representative of biosolids samples collected at the frequencies specified in the table below.

Parameter	Biosolids[1]	
Percent Solids	_____	%
Volatile Solids	_____	%
pH	_____	S.U.
Alkalinity as $CaCO_3$[2]	_____	mg/kg
Nitrogen, (Nitrate)	_____	mg/kg
Nitrogen, (Ammonium)	_____	mg/kg
Nitrogen, (Total Kjeldahl)	_____	mg/kg
Phosphorus, (Total)	_____	mg/kg
Potassium, (Total)	_____	mg/kg
Lead	_____	mg/kg
Cadmium	_____	mg/kg
Copper	_____	mg/kg
Nickel	_____	mg/kg
Zinc	_____	mg/kg
Arsenic	_____	mg/kg
Mercury	_____	mg/kg
Molybdenum	_____	mg/kg
Polychlorinated biphenols	_____	mg/kg
Selenium	_____	mg/kg

(1) Values reported on a dry weight basis unless indicated.
(2) Lime treated biosolids (10% or more lime by dry weight) should be analyzed for percent $CaCO_3$.

7. For Exceptional Quality Biosolids, provide at least one analysis for each parameter. The laboratory analytical data must be representative of biosolids samples collected at the frequencies specified in the table below.

Parameter	Biosolids[1]	
Aldrin/dieldrin (total)	_____	mg/kg
Benzo (a) pyrene	_____	mg/kg
Chlordane	_____	mg/kg
DDT/DDE/DDD (total)[2]	_____	mg/kg
Dimethyl nitrosamine	_____	mg/kg
Heptachlor	_____	mg/kg
Hexachlorobenzene	_____	mg/kg
Hexachlorobutadiene	_____	mg/kg
Lindane	_____	mg/kg
Toxaphene	_____	mg/kg
Trichloroethylene	_____	mg/kg

(1) Values reported on a dry weight basis unless indicated.
(2) Note: DDT = 2,2--Bis (chlorophenyl)--1,1,1—Trichloroethane; DDE = 1,1--Bis (chlorophenyl)--2,2—Dichloroethane; DDD = 1,1--Bis (chlorophenyl)--2,2--Dichloroethane

8. Provide at least one analysis of any other pollutants which you believe may be present in the biosolids. Upon review, additional analyses may be required by DEQ.

_____ _____

_____ _____

Biosolids Sampling Frequency

Amount of biosolids[1] (metric tons per 365-day period)	Frequency
Greater than zero but less than 290	Once per year
Equal to or greater than 290 but less than 1,500	Once per quarter (four times per year)
Equal to or greater than 1,500 but less than 15,000	Once per 60 days (six times per year)
Equal to or greater than 15,000	Per month (12 times per year)

(1) Either the amount of bulk biosolids applied to the land or the amount of biosolids received by a person who prepares biosolids that is sold or given away in a bag or other container for application to the land (dry weight basis).

VIRGINIA POLLUTION ABATEMENT APPLICATION

FORM D

MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-V NON-HAZARDOUS WASTE DECLARATION

For waste to be land applied, the owner, as defined by 9 VAC 25-32, must sign the following statement.

I certify that the waste described in this application is non-hazardous and not regulated under the Resource Conservation and Recovery Act or the Virginia Hazardous Waste Management Regulation (9 VAC 20-60).

_____ Date:_____
(Signature of Owner)

VIRGINIA POLLUTION ABATEMENT APPLICATION

FORM D

MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-VI BIOSOLIDS APPLICATION AGREEMENT

This biosolids application agreement is made on _____ between _____, referred to here as "landowner", and _____, referred to here as the "Permittee".

Landowner is the owner of agricultural land shown on the map attached as Exhibit A and designated there as _____ ("landowner's land"). Permittee agrees to apply and landowner agrees to comply with certain permit requirements following application of biosolids on landowner's land in amounts and in a manner authorized by (VPA) (VPDES) permit number _____ which is held by the Permittee.

Landowner acknowledges that the appropriate application of biosolids will be beneficial in providing fertilizer and soil conditioning to the property and consents to the application of biosolids on his property. Moreover, landowner acknowledges having been expressly advised that, in order to protect public health:

1. Public access to landowner's land upon which biosolids have been applied should be controlled for at least 30 days following any application of biosolids and no biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;

2. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil, or 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation. Other food crops, feed crops and fiber crops shall not be harvested for 30 days after the application of biosolids;

3. Following biosolids application to pasture or hayland sites, meat producing livestock should not be grazed or fed chopped foliage for 30 days and lactating dairy animals should be similarly restricted for a minimum of 60 days. Other animals should be restricted from grazing for 30 days;

4. Supplemental commercial fertilizer or manure applications should be coordinated with the biosolids applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia to be supplied to the landowner by the permittee at the time of application of biosolids to a specific permitted site;

5. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

6. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for biosolids application and specifically prior to any particular application to landowner's land. This agreement may be terminated by either party upon written notice to the address specified below.

Landowner: Mailing Address:

_____ _____

_____ _____

Permittee: Mailing Address:

_____ _____

_____ _____